Improving Access to and Use of Prenatal Care in San Joaquin County

Recommendations for First 5 San Joaquin

Report Prepared for
First 5 San Joaquin Children and Families Commission

By
The Center for Health Improvement

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Executive Summary

Improved access to prenatal care is an important public health issue. The U.S. Department of Health and Human Services *Healthy People 2010* (*Healthy People 2010*), which sets national goals for improving public health, has set the goal that 90% of all women initiate prenatal care during the first trimester, or first three months of pregnancy. In 2001, the national rate of prenatal care initiation during the first trimester was 83.4% (Centers for Disease Control and Prevention, 2002), and the rate for California was 84% (California Department of Health Services, 2002). In San Joaquin County, however, the rate of prenatal care initiation during the first trimester was much lower in 2001, about 72.6% (California Department of Health Services, 2002).

In addition to the relatively low overall rate of early prenatal care use, there are disparities between groups that obtain early prenatal care and those who do not in San Joaquin County. In 2000, the highest rates of early prenatal care use were among White and Native American mothers, both of which were above the San Joaquin County overall rate. The rates for Black, Hispanic, and Asian or Pacific Islander mothers were much lower, and were all below the San Joaquin County overall rate. In this same year, the greatest percent of births were born to Hispanic mothers (42.7%), followed by white mothers (34.8%) and Asian/Pacific Islanders (12.8%). Black mothers represented 7.5% of the total number of mothers giving birth (California Department of Health Services, 2002).

In San Joaquin County, disparities of early prenatal care use also occur by age, with women 19 and younger the least likely to get early prenatal care, followed by women over 40, in 2001. Births to teenage mothers under age 18 represented 5.2% of all births in 2000 in the county. This rate is higher than for California, in which 3.7% of all births are to teen mothers under age 18 (California Department of Health Services, 2002). Educational status is another factor that determines whether a woman receives early prenatal care. The higher the level of education attained by the woman, the more likely she is to obtain early prenatal care. In 2000, 36.1% of children born that year in San Joaquin County were born to mothers with less than 12 years of education. This is somewhat higher than the rate for California, which was 30.8% in 2000 (California Department of Health Services, 2002). Parity also affects when a women enters prenatal care. Women who are the least likely to get into early prenatal care based on parity are women who have had more than four children.

A woman's source of payment for prenatal care is also correlated with how early in the pregnancy she obtains care. In 2001, the majority of women who gave birth in San Joaquin County had some sort of government-sponsored source of payment for prenatal care, such as Medi-Cal. Women who have prenatal care coverage through an HMO or private insurance were the most likely to obtain early prenatal care in 2001. Medi-Cal users were less likely to obtain early prenatal care, and women who paid for their own prenatal care were even less likely to receive early care.

In order to address the relatively low rate of early prenatal care use in San Joaquin County, in early 2003 the First 5 San Joaquin Commission awarded a planning grant to the Center for Health Improvement (CHI) to conduct an assessment of strategies to improve prenatal care access and utilization in San Joaquin County. The purpose of the grant was to identify evidence-based interventions that complement services that are already currently available in the county, in order to prepare the Commission for making funding decisions to improve access to prenatal care.

Based on the findings of this assessment, CHI has developed the following list of recommendations for the Commission. The recommendations address several barriers identified, such as lack of health insurance early in the pregnancy; ambivalent attitudes toward the pregnancy or prenatal care; a lack of knowledge about available resources in the county on the part of both health care providers and patients; poor access to reliable transportation; and inadequate provision of services that are culturally and linguistically appropriate. In addition, the recommendations focus on improving effective resources that already exist in San Joaquin County, as opposed to the creation of new resources.

1. **To address the lack of health insurance early in the pregnancy, the Commission can fund application assistants at clinics and other locations where women receive care. Services can be expedited though the use of the One-E-App system.**

In San Joaquin County, women who have health insurance coverage through Medi-Cal at the time of birth are less likely than women who have private or HMO health insurance coverage to initiate prenatal care during the first trimester (64% versus 89% and 79%, respectively, in 2001). This indicates that women may have trouble securing coverage through Medi-Cal during the first trimester of pregnancy. Though there are sites where women can go to receive assistance in filling out applications for Medi-Cal, many of the application assistants are overworked. To alleviate the burden for these workers, and to make assistance more accessible for patients, the Commission can fund application assistants at clinics where such assistance is necessary. In addition, web-based application programs have improved the speed and efficiency with which pregnant women are determined eligible for Medi-Cal. Use of such a system by application assistants can therefore improve early access to prenatal care.

2. **To address the lack of health insurance early in the pregnancy, the Commission can fund the provision of continuing medical education for providers regarding programs to improve early access to care, such as presumptive eligibility.**

According to several county stakeholders, presumptive eligibility is not working well in San Joaquin County, primarily due to confusion about the application process, and due to provider fears about not being reimbursed or having to "drop" patients who are not eligible for Medi-Cal. Additional education to address confusion about this program may improve usage rates among providers in the county.

3. **The Commission can support outreach efforts to educate women on the importance of early prenatal care.**

Findings from a 2002-2003 survey at San Joaquin General Hospital indicated that 19% of women who received late prenatal care were ambivalent about the pregnancy, and 15% did not think at the beginning of the pregnancy that prenatal care was important for the health of the baby. If women are ambivalent about pregnancy, or do not value prenatal care or feel that it affects the health of the baby, they are less likely to receive timely care. Outreach efforts to educate women of childbearing age as well as their family members about the importance of prenatal care may encourage women to seek care earlier in their pregnancies. These efforts can include media campaigns, the use of community health promoters, and information dissemination at places where women obtain reproductive and other health services, including family planning services. Outreach efforts also can be coordinated through collaboration by several service providers.

4. **The Commission can support the development a "one-stop shopping" center which can provide women with access to an array of reproductive health and social services.**

A "one-stop shopping" center was suggested at the community meeting by several of the meeting attendees as a way to provide several maternal health-related services at the same time, to increase the number of services that a woman obtains, and to make it easier for the patient to obtain all necessary services she needs for a healthy pregnancy. Services provided at such centers often include daily pregnancy testing without appointments, prenatal care, telephone access to midwives, home visiting, postpartum care, social services, assistance with entitlement programs, and parenting training. Family resource centers in San Joaquin County already provide some of these services, so the Commission can support the expansion of reproductive health and social services at these or similar centers to improve access to prenatal care.

5. **To address poor patient and provider knowledge of the resources that are provided in the county, the Commission can fund the development and dissemination of a list of available services, with contact information.**

Findings from the 2002-2003 survey conducted at San Joaquin County General Hospital demonstrated that 20% of women who initiated prenatal care after the first trimester did not know where to go to obtain prenatal care services. The development and strategic dissemination of a resource list could make it easier for women to access available services earlier in the pregnancy. Likewise, many health care and social service providers who attended the community meeting acknowledged that they were not familiar with all of the prenatal care services that are provided in the county, and that at most they knew of about 60% of all services available. A list of providers, categorized by type of service, would allow providers to work together to provide diverse services to their patients.

6. **The Commission can encourage the expansion of a coordinating Prenatal Care Task Force, to monitor ongoing prenatal care issues.**

As there are already several commissions and coalitions in the county addressing issues related to child health and safety, it is possible that one of these commissions could use their meetings to address prenatal care issues as well. These meetings can improve communication among county stakeholders, and can provide a forum for discussion of on-going barriers to prenatal care in the community. The meetings can also provide an opportunity to educate stakeholders and service providers on services that are available in the county.

7. **To improve access to transportation, the Commission can fund pre-existing van services to take women to and from prenatal care appointments.**

Findings from the 2002-2003 survey conducted at San Joaquin County General Hospital showed that a lack of access to consistent transportation was a barrier to early prenatal care use for 31% of women who did not receive early care. Therefore, transportation is the barrier that affected the greatest number of women surveyed. By providing additional funding to expand van services that already exist, such as the El Concilio van service in South Stockton, the Commission can overcome a major barrier in the county. The van service can compensate for the lack of public transportation in areas of the county that are more sparsely populated. Additional funding can widen the van service area, or can provide a greater number of vans in service.

8. **To improve the content of prenatal care, the Commission can improve service provider access to translators in the county, or can partner with another agency or organization to develop materials that are culturally and linguistically appropriate, as well as of the proper literacy level, for patients.**

Several community stakeholders noted the importance of access to health care that is linguistically and culturally appropriate. The quality of healthcare can be diminished greatly if communication between the provider and the patient is inhibited by communication barriers, which can be caused by both cultural and linguistic barriers. It is important for providers to overcome these barriers by providing translators, when necessary, and by providing materials that are culturally and linguistically appropriate for the patient. The Commission can assist with the provision of translators by improving provider access to translators on an "as needed" basis. For instance, the Commission can include contact information for translation service providers in a resource directory for the county. The Commission can also partner with other agencies or organizations to produce culturally and linguistically appropriate materials for providers to give to their patients, or to encourage widespread dissemination of materials that are currently available. In order to address possible health literacy issues, these materials should also be simple to read, and provide demonstrative pictures, and should promote motivation, self-empowerment, and patient action, which will make the materials easier to understand and more relevant for the patient.

Project Overview

About First 5 San Joaquin Children and Families Commission

The First 5 San Joaquin Children and Families Commission (Commission) was created in 1998 to improve the health of children prenatal to age five and their parents living in the county. The Commission and its initiatives are supported by a state tobacco product tax whose funds – according to Proposition 10 -- are dedicated to improving the health of young children.

About the Project

In 2003, the First 5 San Joaquin Children and Families Commission awarded a planning grant to CHI to conduct an assessment of strategies to improve prenatal care access and utilization in San Joaquin County. The purpose of the grant was to identify evidence-based interventions that complement services that are already currently available in the county, in order to prepare the Commission for making funding decisions to improve access to prenatal care.

The impetus for this planning grant was the low rate of early prenatal care use in San Joaquin County[1]. At 72%, this rate is lower than the rates for both the state of California and for the United States as a whole. In 2001, 84.5% of women in California initiated prenatal care in the first trimester (California Department of Health Services, 2003), as did 83.4% in the United States as a whole (Centers for Disease Control and Prevention, 2002). The San Joaquin County rate of early prenatal care in 2001 is also far below the *Healthy People 2010* objective of 90%.

In San Joaquin County, there have been numerous efforts to improve early prenatal care access and use in the last 10 years, with some success. The rate of early prenatal care use rose substantially in the early 1990s, from slightly above 60% to around 70%, but has remained relatively steady since that time. It can be inferred from these data that although the current programs in the county have had some success in getting women into care, there are still barriers that are inhibiting early access to care.

Project Overview

The purpose of this planning grant is to produce a list of final recommendations to assist the Commission in funding projects that are likely to improve early prenatal care access and utilization in San Joaquin County. To this end, CHI has taken the following steps:

1. CHI performed background research on prenatal care access to determine the most common barriers that inhibit timely use of care, and to determine which of these barriers are most likely to affect women in San Joaquin County. This background

[1] "Early" prenatal care, defined later in the report, is any care initiated during the first trimester (12 weeks) of pregnancy.

research includes two components: a literature review of the seminal works in the field, and a review of local data. The purpose of the literature review is to establish the common obstacles to timely service utilization, such as a lack of insurance, unplanned pregnancy, delayed recognition of pregnancy, and transportation difficulties. An understanding of these barriers is essential to identifying local opportunities for action. The second purpose of the literature review is to research proven strategies to increase access to and utilization of prenatal services. Although "best practice" guidelines for prenatal care do exist, they focus on clinical service delivery rather than on practices to increase access. Therefore, the literature review included a limited search for programs and strategies that have succeeded in improving utilization rates.

To determine which strategies cited in the literature are the most appropriate for the barriers endemic to San Joaquin County, however, we also needed to determine the major barriers to care in the county, and to determine if they correspond with those cited in the literature. Therefore, background research on the county focused on identifying these barriers, as well as on identifying the populations least likely to obtain early prenatal care, and thus most likely to be affected by these barriers. Several programs in the county are already addressing some of the barriers that have been identified, so by comparing the barriers to those cited in the literature, and by finding programs already addressing certain barriers, we were able to identify several gaps in service and make recommendations for how to address the most urgent of these gaps.

2. Information on barriers to prenatal care in the county also emerged during the September 12th, 2003 First 5 San Joaquin Community Meeting, where CHI convened county stakeholders and experts to discuss the successes and failures of the current prenatal system, missed opportunities, gaps in services or outreach, perceived barriers to utilization, and promising programs in the county. By bringing together experts from diverse backgrounds, CHI obtained a well-informed perspective on the current scope of activities to increase prenatal care in the county, as well as some of the challenges faced by those who work daily on this issue.

3. Finally, CHI produced the following report based on data collected from the sources indicated above. This report includes local data on prenatal care access and utilization; a summary of findings from the information gathering session at the community meeting; descriptions of successful models/programs for increasing early entry into prenatal care; and final recommendations for implementation/supporting prenatal care access within San Joaquin County (in the executive summary).

Acknowledgements

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- Ruth Aguila, Health Plan San Joaquin
- Susan Corbin, Neonatal nurse, San Joaquin General Hospital
- Sandra Davis, RN, PhD, Deputy Director, Ambulatory Care Services, San Joaquin County Health Care Services, San Joaquin General Hospital
- Susan DeMontigny, Deputy Director, San Joaquin County Public Health Services, Family Health Division, Maternal, Child and Adolescent Health
- Pheng Lo, Executive Director, Lao Family Community of Stockton
- Charlotte M. Newhart, Independent Consultant
- Rasheda Rahmaan, Blue Cross of California State Sponsored Programs
- Kristen Spracher-Birtwhistle, Associate Medical Group Administrator, Kaiser Permanente Stockton Medical Offices
- Irwin D. Staller, Director, Delta Health Care Agency
- Virginia Valdez, Community Medical Center – Channel Clinic, Community Medical Centers, Inc.
- Lemuel C. Williams, Coordinator, Male Involvement Program, San Joaquin County Public Health Services, Health Education Services

CHI would also like to thank Pyone Cho, San Joaquin Public Health Services Epidemiologist, for his assistance in collecting data on prenatal care use in San Joaquin County. Finally, CHI would like to extend thanks to the many agencies and individuals that participated in the September 12, 2003 community meeting, which provided an invaluable source of information for developing the recommendations found in this report.

Overview of Prenatal Care

Prenatal Care and How it is Measured

The American College of Obstetricians and Gynecologists (ACOG) defines prenatal care as health care and related social services that a woman receives to ensure that she has a pregnancy and birth with optimal outcomes. Services given by health care providers include monitoring health, encouraging good health habits, addressing pregnancy-related complications or co-morbid conditions, and providing information, as well as social and psychological support (ACOG, 2002). ACOG has produced *Guidelines for Perinatal Care*, in conjunction with the American Academy of Pediatrics, which outlines in detail the services that should be provided for women during prenatal care. As the prenatal services needed for a healthy pregnancy extend throughout the whole length of the pregnancy, it is important that women begin care early, and obtain the sufficient level of care, by attending the recommended number of visits to their health care providers.

There are several indices that are used to determine if the prenatal care that a woman receives is sufficient. Though sufficiency is defined differently depending on the index used, the factors that determine sufficiency always include two critical indicators: at what point in the pregnancy prenatal care was initiated, and whether the care received throughout the pregnancy was adequate. The point at which a woman enters prenatal care determines whether she has begun care "early" or "late," and this, as well as the number of visits she receives during the pregnancy, also determines the adequacy of care. ACOG recommends that women begin care in the first month of pregnancy, and attend 14 visits to the health care provider throughout a 40-week pregnancy (Kotelchuck, 1994). However, based on a review of available evidence, the Institute of Medicine and the US Public Health Service recommend only eight to ten visits for women who are low-risk and begin care during the first trimester of pregnancy. The number of visits that is ideal for the low-risk pregnancy is still being debated, and the number of visits for higher risk pregnancies is determined on an individual basis.

A commonly used index to determine the adequacy of care is the Kotelchuck, or the Adequacy of Prenatal Care Utilization (APNCU) Index. This index determines prenatal care adequacy from the two indicators above: during what month of the pregnancy the mother initiated her visits to a health care provider, and the number of visits over the course of the pregnancy. Adequate or adequate plus care is defined as care initiated in the first through fourth months of pregnancy, with at least 80% of visits attended. Inadequate prenatal care is defined as having been initiated in the seventh month or later, with fewer than 50% of recommended visits (Kotelchuck, 1994). Another commonly used index is the Kessner Index, which defines adequate prenatal care as including a prenatal visit during the first trimester of pregnancy and periodic visits throughout pregnancy totaling nine or more by the end of the 36th week of pregnancy. (ACOG, 2002) In this report, early prenatal care is defined as care initiated in the first trimester, or first 12 weeks, of the pregnancy, and is the primary consideration in the development of final recommendations for the Commission.

Literature review

To develop the findings of this report, CHI reviewed the relevant literature on prenatal care access and utilization. This literature review included, among other sources, reports of the American College of Obstetrics and Gynecologists, a limited Medline review of relevant research studies, local California reports, and a small number of sources for models to increase prenatal care access and utilization. Other major studies reviewed include reports of the Institute of Medicine and reports of the Agency for Healthcare Research and Quality (AHRQ).

Importance of Early Prenatal Care

Several early studies demonstrated a link between healthy birth outcomes and adequate prenatal care, including a lower incidence of low-weight and preterm births (Alexander and Cornely, 1987, Gortmaker, 1979, Kessner, Singer, Kalk, Schlesinger 1973). However, the limitations of such early studies have been noted in more recent literature, as additional research has shown a somewhat equivocal relationship between prenatal care and low birth weight (Fiscella, 1995, Alexander and Korenbrot,1995, Frick and Lantz, 1996, Kogan, Martin, Alexander, et al. 1998). Generally, the research has shown that adequate prenatal care is associated with reduced rates of low birthweight, but this is primarily among infants that are full-term. The inability to easily demonstrate a causal relationship between prenatal care and low birthweight or decreased infant mortality is primarily due to the complexity and variability of prenatal interventions, and the difficulty of measuring adequacy, use and content.

Despite a lack of overt correlation, some studies do note the overall importance of prenatal care, and that certain interventions may be more effective than others for certain populations at reducing low birth weight and premature birth, such as health promotional advice given by the provider early in the patient's pregnancy (Kogan, Alexander, Kotelchuck, Nagey, 1994, Lowry and Beikirch, 1998, McCormick and Siegel, 2001). In addition, it has been noted that women should enter care during the first trimester to determine if the mother is at high-risk, or is in poor health, so that preventive health measures can be taken to optimize birth outcomes (Brown, 1988).

Income, race, age and educational levels are all predictors of when a woman will obtain care (Mayer, 1997, ACOG, 2002); women who are the least likely to obtain care are often those that need it the most. For example, socially disadvantaged women are more likely to be affected by chronic diseases such as diabetes and hypertension, are more likely to exhibit behaviors such as substance abuse and smoking, and are more likely to have poor nutrition. In addition, women who get prenatal care early are more likely to provide better care for the child once the baby is born, so entry into early prenatal care can have lasting positive effects on the health of the child (ACOG, 2002).

During the 1980s, the issues of infant mortality and low birth weight became national priorities, and several studies cited prenatal care as the major factor in the prevention of these two conditions. One of the ground breaking works to address each of these barriers

in this field is the Institute of Medicine (IOM) report, *Prenatal Care: Reaching Mothers, Reaching Infants* (Brown, 1988), which analyzes barriers to adequate prenatal care, as well as barriers that are perceived by women. This study followed an earlier study, *Preventing Low Birthweight* (IOM, 1985), which, among other topics, reviewed the role of prenatal care in helping to prevent low birth weight, and looked at access and content of prenatal care to optimize positive birth outcomes. In 1989, the Public Health Service Expert Panel on the Content of Prenatal Care convened to determine the components that should be included in effective prenatal care, as a result of the findings of several earlier studies. The Panel viewed prenatal care as one element in the reproductive health of a woman, and created a series of objectives for the health of the mother and the baby, as well as the family. The three main components identified were health promotion, risk assessment, and intervention.

Based on the conclusions of these reports, a number of policy interventions were established during the following years. However, in 2000, the Department of Health and Human Services convened five agencies within the department to discuss on-going issues in prenatal care and maternal health at the following conference: *Improving Maternal Health Care: The Next Generation of Research on Quality, Content, and Use of Services.* The objectives of the conference included the identification of methods to evaluate the quality, content, and use of maternal health care, and the identification of strategies to assess the impact of behavioral interventions during pregnancy for different groups of women. A result of the conference was an overwhelming consensus about the importance of moving beyond the traditional concept of prenatal care and integrating it into a broader conception of women's health, i.e. what they need not only during pregnancy, but before and after as well.

What the Research Tells Us About Prenatal Care

Many studies that have sought to demonstrate the importance of prenatal care have found that there are many characteristics that are associated with delayed prenatal care. As a result, additional studies have sought to determine the barriers that are most likely to inhibit early prenatal care. Barriers to prenatal care are typically categorized into three categories: financial constraints, personal factors that directly affect a woman's ability to seek care, often termed psychosocial barriers, and systems issues relevant to accessing and utilizing care. Another important barrier to the effective utilization of prenatal care is the content of care received, so it is also addressed in the literature review.

Financial Constraints

The greatest financial barrier to prenatal care is the inability or the perceived inability to obtain insurance or afford prenatal care. Medicaid expansions during the 1980s and 1990s, and the advent of strategies in many states to encourage early enrollment, such as out stationing of workers, shortening the applications, waiving the assets test and presumptive eligibility, were all strategies that led to increased enrollment. Additional state-level coverage programs such as Access for Infants and Mothers (AIM) in California increased the income eligibility for mothers, in this case up to 300% of the

federal poverty level. For the fiscal year 2002-2003, enrollment in AIM in San Joaquin County was relatively low, at 109, which is in addition to the 415 women who were already enrolled before July 2002 (California Managed Risk Medical Insurance Board, 2003). In California, studies have shown that it is low-income women that are the least likely to obtain insurance early, and are thus not covered during the first trimester, inhibiting early care (Nothnagle and Marchi, 2000). Studies have also shown that although most women are able to obtain heath insurance by the time they give birth, many are uninsured during the first trimester, indicating the difficulty women have in obtaining early care (Braveman and Marchi, 2002). In California, poor access to health insurance is often associated with certain ethnic groups and with low-income status. Latina women, particularly those who speak only Spanish, are at a greater risk for not having insurance (Perry, Stark, Burciaga Valdez, 1998), though typically, they have better birth outcomes that other groups. Barriers or perceived barriers to insurance cited in a report by the Kaiser Family Foundation include being unclear about eligibility, inconvenient hours of operation for the Medi-Cal office, long lines at the offices, forms that are complicated and redundant, and the fact that they cannot make a mistake or they have to start the process over from the beginning. Other barriers cited include having to give too much personal information, language barriers, fears about immigrant status, and that workers are rude, which makes the process demeaning (Perry, Stark, Burciaga Valdez, 1998).

Personal or Psychosocial Barriers

The barrier category of personal factors that affect a woman's entry to prenatal care is a diverse category encompassing attitudes, behaviors, and social factors. Attitudes towards the pregnancy can greatly affect whether a woman receives early prenatal care. Attitudinal barriers include whether the pregnancy is desired, whether prenatal care is perceived as being important to the health of the mother and the baby, and the effect of any negative experiences in the past with the health care system or with pregnancy or giving birth. This category includes any behaviors on the part of the mother, including nutrition, tobacco, alcohol or drug use, as well as other behaviors, that can inhibit the use of timely care. Finally, this category of barriers also includes socio-demographic variables that are correlated with late prenatal care use, including low level of education, poor family or social supports, parity, mother's age, income, housing conditions, and cultural norms and expectations concerning prenatal care.

Several studies have demonstrated the link between psychosocial factors and low birthweight. A study of the New Jersey HealthStart program found that enrollment in the Women, Infants, and Children Program (WIC) was a definite factor that increased birthweight (Reichman and Teitler, 2003). An earlier study found that women who lived in poor housing conditions, and those who used alcohol or drugs had the reduced likelihood of entering care early. However, the most important factor identified that affected when a woman began prenatal care was her desire of the pregnancy (Pagnini and Reichman, 2000). A California study found that logistical barriers, such as transportation and childcare access, played a relatively small role in delaying prenatal care, and that the more important factors were education and desire of pregnancy (Braveman, 2000).

Another study found that 45 minutes of psychosocial counseling at a prenatal care appointment was correlated with increased birthweight (Zimmer-Gembeck, 1996).

System-related Barriers

Finally, system-related barriers to care include issues such as a lack of transportation, either public or private, excessive wait times at clinics, insensitive providers, and difficulty finding childcare. A study at the California State University, Bakersfield, found that, among a population of African American women, three-quarters of the pregnancies were unplanned, and that the most common barriers to care were transportation and long waiting times for appointments (Mikhail, 1999). Another study sponsored by Agency for Healthcare Research and Quality (AHRQ) found that low-income women were significantly more satisfied with the care that they received if their procedures were explained by the health care provider, if there were short waiting times for care, and if ancillary services, such as substance abuse services and childbirth education, were made available (Handler, et al 1998).

Content of Care

Another important aspect of prenatal care is the content of care received. Though there are best practice guidelines for the provision of clinical services, as well as for social services such as nutrition education and smoking cessation, health literacy is an issue that is rarely directly addressed, but that can greatly affect the quality of care received. If a patient is not sufficiently health literate to understand instructions or materials given to her, the quality of the care that she receives may suffer. It is also important that services that are provided be culturally and linguistically appropriate, in order to ensure that the information given is understood by the patient.

The importance of health literacy has been identified as a priority area for national action by the Institute of Medicine, and the American Medical Association has convened an Ad Hoc Committee on Health Literacy. The Committee found that inadequate health literacy resulted in an array of communication difficulties, which resulted in patients reporting worse health status and having less understanding about their medical conditions and treatment (Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs, American Medical Association, 1999). Several guides have been produced that outline the components of culturally competent medical practices, such as the U.S. Department of Health and Human Services publication, *Cultural Competence Works.* The publication was based on findings from the 1998 Cultural Competence Works competition on successful practices in delivering culturally competent care. A study found that a cost-effective way of developing materials that are culturally and linguistically appropriate is to take preexisting materials that are in English and translate them, working with teams of perinatal outreach workers from different cultures (Smith and Gonzales, 2000).

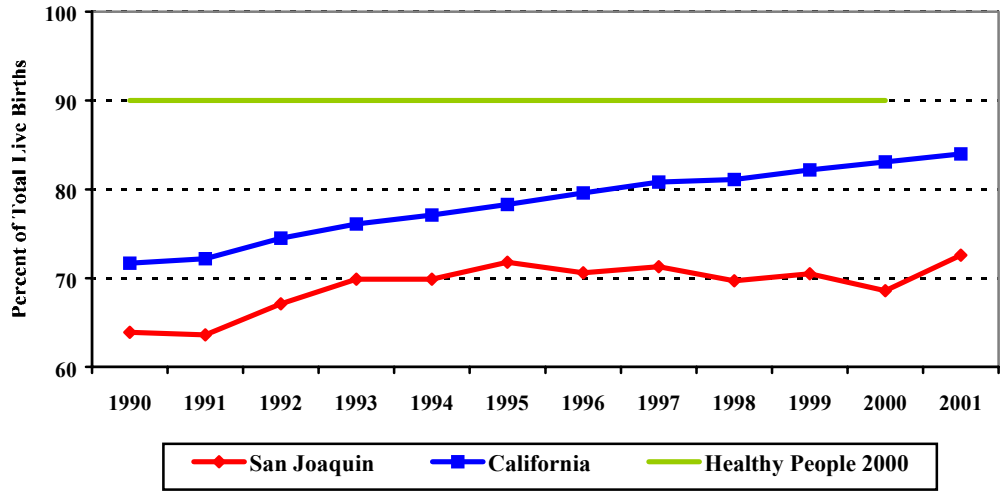
Prenatal Care Access in San Joaquin County

Overview of Issue

CHI also reviewed current and recent data on prenatal care access and use in San Joaquin County. The source for most of the data, which included prenatal care usage by ethnicity, age, type of insurance, and geographical location, was obtained through San Joaquin County Public Health Services. Other information, such as utilization barriers, which include transportation and attitudes towards pregnancy and prenatal care, was obtained from a survey conducted at San Joaquin General Hospital by the National Public Health and Hospital Institute (NPHHI), and through anecdotal testimony given by local stakeholders at the September 2003 community meeting.

As noted previously in this report, the *Healthy People 2010* objective is that 90% of pregnant women initiate prenatal care during the first trimester of pregnancy. Nationally, 83.4% of women in 2000 received timely prenatal care (National Center for Health Statistics, 2002), as did roughly 83.1% of women in California (California Department of Health Services, 2001). In contrast, only 72% of women in San Joaquin County received timely prenatal care. In 2001, the county ranked 48th out of 58 in California as having the greatest number of residents who begin timely prenatal care (California Department of Health Services, 2003). The percent of women entering prenatal care early in the county increased markedly from 1990-1993, from around 63% to around 70%, but has stayed relatively consistent since that spike.

Figure 1. Early Entry into Prenatal Care (1990-2001)

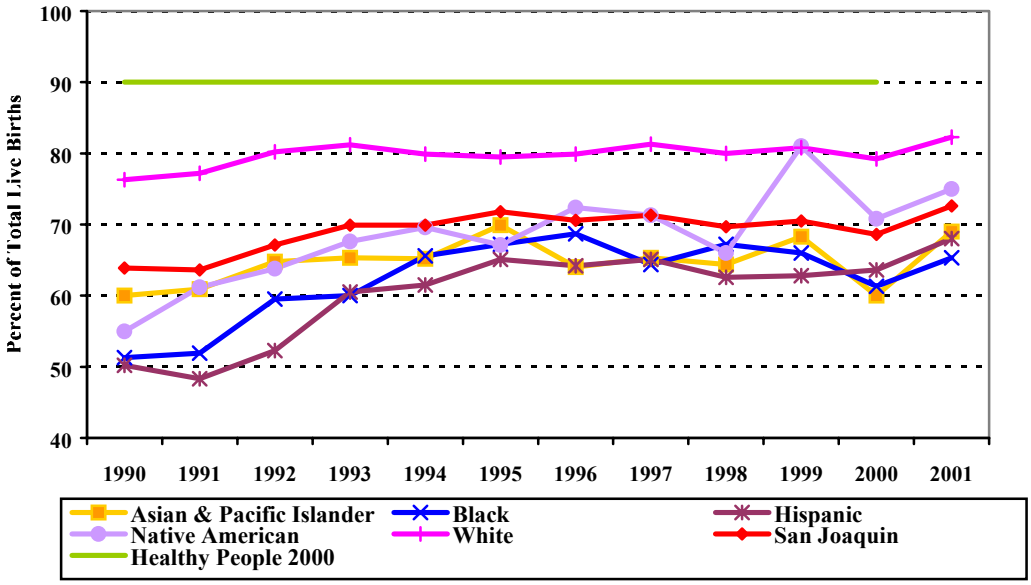


Source: San Joaquin County Public Health Services, 2003

At-risk Populations

In addition to the low overall rate of early prenatal care use, there are disparities between groups that obtain early prenatal care and those who do not. Although the rate of timely prenatal care has improved for all ethnic communities in San Joaquin County, many are still below the county average. From 1990 to 2001, the groups that saw the greatest gains in use of timely prenatal care were Native American women (36.4% increase), followed by Hispanic women (35.5%). Asian and Pacific Islanders showed the smallest degree of improvement, at 15%. In 2000, the greatest percent of births were born to Hispanic mothers (42.7%), followed by White mothers (34.8%) and Asian/Pacific Islanders (12.8%). Black mothers represented 7.5% of the total number of mothers giving birth (California Department of Health Services, 2002).

Figure 2. Early Entry into Prenatal Care by Maternal Race/Ethnicity (San Joaquin County, 1990-2001)



Source: San Joaquin County Public Health Services, 2003

In San Joaquin County, disparities of use also occur by age, with women 19 and younger the least likely to get early prenatal care, followed by women over 40. Births to teenage mothers under age 18 represented 5.2% of all births in 2000 in the county. This rate is higher than for California, in which 3.7% of all births are to teen mothers under age 18 (California Department of Health Services, 2002). Educational status is another factor that determines whether a woman receives early prenatal care. The higher the level of education attained by the woman, the more likely she is to obtain early prenatal care. In 2000, 36.1% of children born that year in San Joaquin County were born to mothers with less than 12 years of education. This is somewhat higher than the rate for California,

which was 30.8% in 2000 (California Department of Health Services, 2002). Parity also affects when a women enters prenatal care. Women that are the least likely to get into early prenatal care based on parity are women who have had more than four children. For more data, please see Appendix II.

Another important indicator of early prenatal care use is access to insurance. Table 5 in Appendix II indicates that in 2001, the majority of women who gave birth in San Joaquin County had some sort of government-sponsored source of payment for prenatal care, such as Medi-Cal. A woman's source of payment for prenatal care is also correlated with how early in the pregnancy she seeks care. Table 6 in Appendix II shows that women who have prenatal care coverage through an HMO or private insurance are the most likely to obtain early prenatal care. Medi-Cal users were less likely to obtain early prenatal care, and women who paid for their own prenatal care were even less likely to receive early care.

Entry into early prenatal care is also disparate by geography. For example, there are certain zip codes of Stockton, the most populous city in San Joaquin County, where residents are significantly less likely to obtain early prenatal care, due most likely to socio-economic factors that tend to affect geographic areas.

Relationship Between Prenatal Care, Low Birth Weight, Pre-term Delivery, and High-risk Births

Table 8 in Appendix II shows that about 6.3% of births in 2001 in San Joaquin County were low or very low weight, and table 9 shows a strong relationship between low birthweight and ethnicity. In the county, babies born to Black and Native American mothers have the highest rates of low birthweight, 10.1% and 9.1%, respectively.

The data presented in table 10 show a weak relationship between early prenatal care and low birthweight. The rate of low birthweight is the same for babies born to mothers who received early or late prenatal care, 6%. However, the percent of low birthweight births is much higher for women who did not receive any prenatal care at all, at 23.8%. Therefore, it appears that some prenatal care is a protective factor against low birth weight in San Joaquin County; however, this data does not support early prenatal care as a protective factor against low birth weight when compared to care that is received in the second or third trimesters.

The relationship between early prenatal care and pre-term delivery is similarly unclear. Over 10% of babies born to mothers who received early prenatal care were born pre-term, as were 10.2% of babies born to women who received late prenatal care. Over 13% of babies whose mothers received no prenatal care were born pre-term. Again, some prenatal care is associated with better birth outcomes, but the difference in outcomes based on timing of prenatal care entry is not significant.

Therefore, the data demonstrate that prenatal care use can result in better birth outcomes, but the data is unclear on the extent to which early prenatal care impacts low birth weight

and preterm births. However, despite the relatively weak relationship between early prenatal care and better birth outcomes demonstrated by the data, it is important that women enter prenatal care as early as possible. As demonstrated in the literature review section of this report, early entry into prenatal care can improve birth and maternal outcomes in cases where the pregnancies are high-risk, which should be determined as early as possible in the pregnancy. Prenatal care can also provide women with information on behaviors that can either protect the baby, such as good nutrition, or harm the baby, such as poor nutrition, tobacco, drug, or alcohol use. Nutrition, tobacco, drug or alcohol use can greatly impact the health of a fetus, so it is important that women obtain this information as early as possible in the pregnancy.

Information Gathering from Experts and Stakeholders

In addition to the findings of the *Barriers to Prenatal Care Study*, the other source of information on local barriers utilized for this report was the testimony from the First 5 San Joaquin Prenatal Community Meeting on Friday, September 12, 2003. The purpose of the meeting was to study strategies to increase access to and utilization of prenatal care among pregnant women in San Joaquin County. Community members and stakeholders came together to discuss barriers that inhibit women's access to care, as well as strategies and programs that have been successful in improving access to and utilization of care.

Morning Session – Community Speakers

Susan DeMontigny, MSN, PHN gave the presentation, "Prenatal Care – Access and Utilization Issues." Ms. DeMontigny, director of Public Health Nursing and the Family Health Division of the San Joaquin County Public Health Services, gave an overview of the current statistics on prenatal care in San Joaquin County.

Jose Rodriguez, Executive Director at El Concilio, presented an overview of El Concilio's programs related to improving prenatal care access and utilization. This includes a program to provide translators for Spanish-speaking women delivering at San Joaquin General Hospital, and a van program that provides women with transportation to prenatal appointments.

Pheng Lo, *Executive Director of Lao Family Community of Stockton*, discussed his organization's work in improving access to health care, including prenatal care access, among the Lao community in San Joaquin County. Mr. Lo noted the importance of linguistic and cultural barriers that can keep women from receiving timely prenatal care.

Rebecca Resendiz, *Development Director at the Stockton Shelter for the Homeless,* discussed the particular barriers to prenatal care that homeless women and families face.

Francisco Ramirez, Project Coordinator, Planned Parenthood Mujer Sana Program, discussed his experience in working with Spanish-speaking migrant workers to improve access to prenatal care and to family planning services. Mr. Ramirez described the informal "chat sessions" he leads, in which the women are invited to ask questions and share information. An important lesson that Mr. Ramirez learned through this program is to involve many women in the community, not only those of childbearing age, as pregnant women are likely to receive prenatal care advice from the older women in their families (sisters, mothers, grandmothers, etc.).

Afternoon Session – Small Group Discussion

After an hour of brainstorming strategies to improve prenatal care services in the county, the six small groups came back together to present the findings on the six topics. Below are the major findings of each group, including successful strategies and specific

programs that have proven to be successful. The following six topics were addressed in small group discussion:

- Improving access to health insurance
- Improving provider services
- Developing effective media campaigns
- Improving access to provider services
- Connecting women to services in their communities
- Improving male and family involvement in prenatal care

Common Themes and Findings

There were several common themes that arose throughout the day. **The most common theme that surfaced was the lack of communication among the various community organizations throughout the county. It appears that there are many services to assist women with finding prenatal care in the county, but each organization is unaware of all of the other services that are provided.** In the evaluations of the meeting, attendees consistently noted that one of the most successful aspects of the meeting from their perspective was the networking opportunity that it presented.

Second, many attendees noted the need for services and materials that are culturally and linguistically appropriate, and that materials need to be at a literacy level where all persons can understand and utilize them effectively. Many meeting attendees noted the success of the El Concilio translation program for Spanish-speaking women at San Joaquin General Hospital, and indicated that a similar program for other languages would be useful.

A third common theme was the need for transportation services. Many attendees noted that a lack of transportation affected women's ability to attend appointments, and many noted the great success of the El Concilio van service in South Stockton that transports women to and from their prenatal care appointments.

Several other themes related to access included the importance of one-on-one work and outreach in finding and working with at-risk populations, improving case management services to ensure continuity of care, providing persons in clinics who can help women with Medi-Cal paperwork, and educating health care providers on presumptive eligibility and Medi-Cal. Meeting attendees also stressed the importance of informing mothers of services, and providing information on where to go to obtain them. Meeting attendees also suggested the creation of a one-stop shopping center to address several of these issues.

Barriers and Strategies to Address Them

In the literature, barriers to prenatal care are typically grouped into the following categories: financial barriers, including insurance; psychosocial factors, which include attitudes towards the pregnancy and maternal behaviors; and structural barriers, which includes standards of care, transportation, etc. Another important dimension that affects the effective utilization of prenatal care is the content of care received. Though clinical prenatal care guidelines have been established by a number of agencies and organizations (ACOG, Institute of Medicine, American Academy of Pediatrics, etc.), issues such as health literacy and cultural and linguistic barriers continue to hamper effective communication between providers and patients, diminishing the quality of care received. Therefore, these barriers are also addressed below.

Financial Barriers

In San Joaquin County, the greatest financial barrier identified in the research is access to health insurance early in the pregnancy. This seems to occur both because women are unable to access health insurance necessary for the care early in pregnancy, and because of provider misconception of the mechanisms that are in place to overcome this barrier, such as presumptive eligibility.

1. Access to Health Insurance Early in the Pregnancy

Although, by the time of delivery, only about 2% of all mothers in San Joaquin County have not accessed any prenatal care, early prenatal care access appears to be a greater problem among Medi-Cal recipients than it does among women in an HMO plan. The data presented in Appendix III show that only 63.7 % of women using Medi-Cal as their primary source of payment for prenatal care got in early, as opposed to women covered by private insurance (89%) or an HMO (79.7%), in 2001. Women who self-pay are even less likely to get into early prenatal care, at only 36.9%. In addition, in the *Barriers to Prenatal Care Study,* a study conducted by the National Public Health and Hospital Institute, women cited not having insurance before pregnancy as an important financial barrier to obtaining early care (please see Appendices III and IV for more information on the *Study*). The most likely barrier to care was the perceived cost of care before pregnancy, which affected 21% of the respondents. The next most likely barriers were a lack of insurance (19%), and an inability to find a location that accepted the insurance the women had (15%).

This local data supports what has already been confirmed in numerous studies. In California, for example, expansions in Medi-Cal maternity coverage during the 1990s resulted in a drop in the proportion of uninsured women from 13% to 3%. During this same period, early prenatal care use rose from 73% of women to 84% of women. Though prenatal care use improved among all populations, care use improved disproportionately among groups that were more likely to use Medi-Cal services, and were the target recipients of coverage expansion such as women with low education levels, African

American and Latina women, immigrant women and adolescents. However, many women still do not receive early prenatal care, and these women are disproportionately low-income. As half of all births in California are born to women who are below 200% of the federal poverty level in income, it is necessary that efforts are still focused on these groups to improve prenatal care access (Braveman, et al., 2003).

It is unlikely that the Commission can take action to increase prenatal care access for the women in the County who do not have and are ineligible for health insurance coverage. However, the Commission can take steps to improve access for a greater number of women by easing the process by which they obtain Medi-Cal, and by assisting them in finding locations that will accept their insurance and working with local agencies to educate providers on presumptive eligibility.

Solutions

Fund outreach efforts to determine and assist with eligibility, using methods such as the One-E-App system

Outreach is already widely used throughout the county and throughout the state, after it became a priority to "outstation" Medi-Cal workers to assist women in filling out paperwork and in determining their eligibility. However, as there are still women on Medi-Cal who are not getting into early prenatal care, it would be helpful to fund individuals to assist women to fill out paperwork, in order to expedite care. For example, Delta Health Care Agency has one employee that once a week visits one of their clinics and helps women fill out Medi-Cal paperwork. This helps bring the agency to the women, as opposed to bringing the women to the agency, which can overcome some initial barriers such as a lack of transportation or childcare.

El Concilio, a non-profit organization in the county, provides Spanish-speaking translators for women giving birth at San Joaquin General Hospital through their maternal advocacy program. The advocates, who are present during the birthing process, help to alleviate fears and misunderstandings surrounding prenatal care and birthing. The advocates also assist clients with completing birth records, registration and any other necessary documents. Nurses at SJGH have indicated how successful this program has been in assisting them with duties such as filling out Medi-Cal papers. Currently this program is primarily for the birth process, and not for prenatal care: it could be extended to include prenatal care services, or it could be extended to include advocates that speak other languages. For example, nurses have often found difficulty finding translators for Arabic and Indian-speaking women and their families.

The small group that discussed increasing access to insurance at the September 2003 community meeting indicated that it would be helpful to have a person who could consolidate all of a client's paperwork, in order to get them enrolled in all necessary programs as soon as possible, and to find out in which programs they are already participating. One-E-App is a program in California funded by the California Healthcare Foundation in partnership with the California Department of Health Services and the

California Managed Risk Medical Insurance Board. It is a web-based application to enroll low-income children and pregnant women into public health insurance programs. Using this program, application assistants can help determine eligibility for pregnant women for Medi-Cal, WIC, and other public programs at once. The program allows for quick preliminary eligibility determination, and can improve efficiency in the application process by removing the need for multiple appointments and forms.

One-E-App is currently being piloted in Alameda, San Mateo and Santa Clara counties. This program is based on Health-E-App, a similar program to increase efficiency in enrolling women and children into Medi-Cal and Healthy Families. An independent evaluation of Health-E-App found that use of the program decreased the time between application submission and eligibility determination by 21%, reduced data errors by 40%, and improved consumer satisfaction – 90% of applicants prefer using the program, and 95% of application assistants prefer the program to paper applications (Atlas et al., 2001).

Support provider education on public insurance provision for pregnant women

At the September 2003 community meeting, a number of attendees noted that presumptive eligibility is not working well in San Joaquin County, and voiced a need for additional health care provider training on Medi-Cal and presumptive eligibility requirements. If the Medi-Cal rules and regulations are fully understood by providers, then they can more easily get women into care. An excellent example of the lack of full understanding of presumptive eligibility occurred during a dialogue at the community meeting. A direct service provider in the county was unaware that her organization could receive direct reimbursement from Medi-Cal for presumptive eligibility services provided, without having to wait for the patient to fill out all of the paperwork and qualify for Medi-Cal. She became aware of this after a conversation with another meeting attendee.

The Commission can support education services for providers on issues such as presumptive eligibility. At the community meeting, it was determined that many providers still need training on issues such as who is eligible and who is not, and for how long. It should also be emphasized that trainings should be given to support staff, including nurses and receptionists, to ensure that all workers with whom the patients come in contact will be able to give them the correct information.

Major Attitudinal Barriers

1. Feelings Toward Pregnancy, Conflicting Attitudes Toward Pregnancy

A common risk factor for not seeking early care is ambivalence toward the pregnancy, as many pregnancies, particularly among teenage women, are unplanned. If the pregnancy is unintended, the mother may not know she is pregnant for several months into the pregnancy, or she may experience ambivalent or negative feelings about the pregnancy,

both of which can delay initiation of prenatal care. A survey of California women found that women whose pregnancies were unintended were one and one-half to two times more likely to delay or have no prenatal care (Braveman, et al, 2003). In addition, 19% of the women surveyed for the *Barriers to Prenatal Care Study* indicated that ambivalence about the baby led them to seek prenatal care after the first trimester.

Solution

Support or advertise family planning services at clinics where women receive prenatal care or other reproductive health care services

This barrier can be resolved through the provision and use of family planning services for and by women of childbearing age. If women plan their pregnancies, they are more likely to know when they are pregnant when they become so, and are less likely to become pregnant unexpectedly. If family planning information is provided on site where women receive prenatal care, or where women receive other reproductive health care services and referrals for prenatal care, women can access the family planning services more easily. Family planning services can be particularly useful for teens, as it has been noted that, nationally, up to 78% of teen pregnancies are unintended, (Alan Guttmacher Institute, 1999) and teens as less likely as a group to receive early prenatal care. A common barrier to teen access of family planning services is a lack of education about where to go and what kind of services they can receive. If teens receive family planning services when they receive prenatal care, they can potentially avoid a second unwanted pregnancy. One in five teen births occur to women who have already had children in their teens (Child Trends Data Bank, 2002).

2. Not Valuing the Importance of Prenatal Care

Another very common attitudinal barrier to early prenatal care is not valuing the importance of prenatal care. Many women may not feel or may not be aware that early prenatal care can affect the health of the baby, as demonstrated by the significant number of women in the *Barriers to Prenatal Care* Study that did not feel that early prenatal care was important (15%). If women feel that early prenatal care is important to the health of the baby, then they are more likely to obtain that care. It is also important that family members value prenatal care, as well, as they can have a great degree of influence on the actions of the pregnant woman.

Solution

Outreach programs to educate women on the importance of early prenatal care

There are several different methods of reaching women with the message that prenatal care is important. In San Joaquin County, many organizations already hold mini-health fairs that have been developed for specific populations or neighborhoods, which provide education on various health issues, including prenatal care. Media campaigns, such as the

California statewide campaign, Baby-Cal, can be extremely effective at promoting early prenatal care use, and can reach a wide and diverse audience.

Direct one-on-one outreach can be effective as well. The San Joaquin County Public Health Services Maternal, Child and Adolescent Health Division's Comprehensive Outreach and Perinatal Education (COPE) program, funded in part by First 5 San Joaquin, provides door-to-door outreach services, community group and agency education, and media education campaigns. An extension of this program could be the inclusion of a "promotora" component. Promotoras are community members who participate in the outreach process. They are often women who have already received the services that they are promoting; in this case, they would be women who have received early prenatal care and benefited from the experience, and are willing to promote early care to other women in their communities. Typically, promotoras are successful because they are members of their communities who speak from their own experiences, and are therefore trusted.

Promotoras have been utilized to perform outreach to communities on several health issues. For example, the Alianza Dominica is a community organization in New York City that provides comprehensive health services for recently immigrated Dominicans. As these individuals' experiences with healthcare in the Dominican Republic were vastly different than that provided in the United States, the job of the promotora is to explain what the various health insurance programs available are, and to overcome any possible misconceptions about the programs, which include Child Health Plus (New York's S-CHIP) or Medicaid (Silow-Carroll et al., 2002). Another example of the successful use of promotoras is the Esperanza Community Housing Corporation, a low-income housing development in Los Angeles. The Robert Woods Johnson Foundation partially funded a training program for bilingual residents of the community, in order to increase access to health care and health information for the residents. After training, the promotoras performed home visiting outreach, and addressed issues such as early childhood immunization, lead poisoning management, asthma management, diabetes screening and other aspects of primary care. During the grant period, an estimated 3500 residents were reached (Robert Woods Johnson Foundation, 2000).

Another program that provides direct outreach and education in an informal setting is the Planned Parenthood *Mujer Sana* program, which performs outreach on prenatal care and family planning to Spanish-speaking migrant workers. The structure of the outreach is as informal "chat" sessions, where the education occurs as a dialogue between the educator and the women attending the session. This format allows the women to feel comfortable discussing their own perceptions of the importance of family planning and prenatal care. An important lesson learned through this program is that it is necessary not only to include women of childbearing age at the sessions, but also older women, as well. This is because older women, such as mothers, grandmothers, and sisters, are often the first and most trusted source of information for young women on family planning and prenatal care. If older women in families value prenatal care, this message will likely be translated to younger women who are of childbearing age.

Major systems barriers

1. Poor Patient and Provider Knowledge of Resources Available in the County

In San Joaquin County, there are numerous services available for qualifying women to improve their prenatal outcomes. There programs include insurance programs, such as Medi-Cal and AIM, the Women, Infants and Children program (WIC), a nutritional program, the Black Infant Health program, Comprehensive Perinatal Service Program, Public Health Nurse Home Visit program, and numerous other social services. However, for women to take advantage of the resources in the county that are available for them, it is imperative that they know where to go and how to access these services. Many women who are low-income may not have access to information about the programs that are available, and sorting through burdensome, complex information to determine if they are eligible can also be frustrating, particularly for women who are not fluent in the languages provided, or who have lower education levels – these women are also often the least likely to get into early care. In the *Barriers to Prenatal Care Study*, 20% of women stated that they did not know where to go to obtain services, indicating that this is a problem for a number of women.

Solutions

"One-stop shopping" Center

A "one-stop shopping" center was suggested at the community meeting by several of the meeting attendees, and is a way of providing several maternal health related services at the same time, to increase the number of services that a woman obtains, and to make it easier for the patient to obtain all necessary services that she needs for a healthy pregnancy. A successful example of a one-stop shopping center for pregnant women was highlighted in the 1995 compendium of "Models that Work," a program by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services that highlights programs that have been successful in addressing an array of public health issues. The model highlighted was the Mary's Center's Comprehensive "One-Stop Shopping" Maternal and Child Health Program. This Center, in Washington, D.C., was established to address the need for affordable, comprehensive, bilingual and culturally competent maternal and pediatric services for the immigrant Latino community in the region. Services provided included: daily pregnancy testing without appointments, prenatal care, 24-hour access to midwives by telephone, home visiting, postpartum care, social services, parenting training, assistance with entitlement programs, and case management of referrals to a network of more than 25 public and private community-based agencies. Services that are provided are culturally and linguistically sensitive, and as a result, the program has had success in enrolling Latina women into early prenatal care. The program has also had success in keeping premature birth and infant mortality rates low (HRSA, 1995).

Another issue that was noted several times at the community meeting was the difficulty that providers have in coordinating services for their patients. Most providers present at

the community meeting indicated that they felt that they knew of no more than 60% of the services that are provided for pregnant women in the county. It appears that there are many services in the county, but because they are so fragmented, providers are unable to connect, and therefore the resources in the county are not being used as effectively as possible. If health care providers are more aware of services that are currently provided in the county, it will be easier for them to refer women to specific services that they may need. Likewise, though there are some resources available for women who need to find services if they are pregnant, such as an informational hotline through Public Health Services and several brochures that provide information on the services that are available, it is likely that women are not utilizing these resources effectively, or they are not available to a sufficient number of women.

Resource directories for patients and providers

One solution that would likely assist many patients and providers is a directory of all of the services provided in the County, categorized by service, including some information on eligibility requirements for the patient. The directory could give contact information for each of the services provided, and written in such a way that the information is easy for patients to understand. Optimally, if women could obtain the directory prior to pregnancy, so that once they know they are pregnant, they will be able to access services as early as possible in the pregnancy. This directory could be similar to several brochures that are already provided by Public Health Services. For example, a brochure about the Family Health Division provides information on all of the Division's programs, as well as contact information. This concept could be extended to include all programs in the County.

For the directory to be useful for providers, it could be categorized by type of service provided, and can be displayed or dissemination in such a manner that many providers have access to it, such as via the Internet. Currently, there are resource books available to providers, but according to stakeholders that spoke at the community meeting, they are not organized in a manner that is conducive for finding services quickly for individual clients. Therefore, it is imperative that the directory is organized in such a manner that it is easy to use when conveying information to clients, and that it includes information on all prenatal care services available.

Increase coordination of available services

On-going collaboration between organizations and agencies that provide prenatal care can improve the care provided by allowing information sharing and coordination of services provided, as well as a forum to discuss lessons learned. As noted at the community meeting, there are already several committees that convene regularly to address issues related to child health. Instead of creating a new committee to address issues related to prenatal care, it would be more feasible to incorporate discussion on prenatal care during the meetings of preexisting committees. In Solano County in California, the Public Health Department has a Perinatal Access Committee that meets monthly to share information, and to formulate recommendations to the Maternal, Child

and Adolescent Health Board on behalf of pregnant and parenting women. The committee's accomplishments include a survey of pregnant women in the county, asking them to identify the major barriers to prenatal care, and the development of outreach flyers for clinics in the county. The committee has also been able to identify ongoing barriers to prenatal care that they continue to address. Participating affiliations include area hospitals, social and public health services, local clinics, as well as other programs.

2. Lack of Reliable Transportation

Adequate and consistent transportation to prenatal care appointments is clearly an issue, both from the perspective of the patient, and from the perspective of the service provider. In the *Barriers to Prenatal Care Study*, transportation was identified as the most important barrier to adequate and early care for 31% of the women surveyed, and at the September 2003 community meeting, several care providers noted repeatedly that transportation was a barrier for many of their clients. A report that analyzed major prenatal care barriers and correlates for women in California, found that transportation was not, after statistical regression, considered a barrier to prenatal care for most women in California (Braveman, et al, 2003). However, specifically in San Joaquin County, transportation may pose more of a barrier, given that a significant portion of the county population lives in the rural areas (around 10%), and about 60% of the population lived outside of Stockton in 2000 (US Census, 2000), away from where most medical services are provided, and that the public transportation system in these areas is limited. Community members at the meeting spoke of problems that health care providers have in working with the bus schedule. For instance, many women time their appointments around the bus schedule, and providers cannot see all of the women at the same time, so the patients have to wait for several hours after they have arrived at the office to see the health care provider.

<u>Solution</u>

Fund a van services to provide transportation for women

One solution is the provision of funds for a van service that women can use for their prenatal appointments, if they do not have access to private or public transportation. Women can arrange in advance to have the van pick up and drop off at scheduled times. A van can eliminate the uncertainty of public transportation and can give the patient more choices when choosing a time to see her physician. This can also help health care providers by not having patients waiting for long periods of time in their offices.

A program that has been successful at providing transportation for women to attend health care appointments is the van service provided for women in South Stockton by El Concilio. Several community meeting participants noted how successful this program has been in providing transportation for their clients when otherwise there would have been none. As transportation is still a problem for many women, this program could be expanded to provide services to other areas of Stockton, or to women who live in the outlying areas, where public transportation is not available.

Content of Prenatal Care

Best practices for the content of prenatal care have already been established, such as taking the mother's blood pressure and weight at each visit, and detecting possible problems such as hypertension and diabetes. The American College of Obstetricians and Gynecologists has developed a set of guidelines that are progressively more comprehensive, and include guidance on issues such as nutrition and physical activity during pregnancy, domestic violence during pregnancy, smoking cessation, and other issues that historically are not addressed regularly by health care providers. However, the quality of care received can be diminished greatly if the communication between the health care provider and the patient is inhibited. Though communication can be adversely affected by many factors, two relevant factors for women in the County are health literacy and linguistic and cultural barriers.

Health Literacy

Healthy People 2010 defines health literacy as "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions." *Functional* health literacy is defined as "the ability to read and comprehend prescription bottles, appointment slips, and other essential health-related materials required to successfully function as a patient." (Center for Health Care Strategies, 1998) According to the National Adult Literacy Survey, 40-44 million adult Americans (21%) are functionally illiterate, which is also defined as not being able to read at above a fifth-grade level or cannot read at all. According to the American Medical Association, another 50 million or 25% of adults are marginally literate: they are able to locate information in a simple text, but are unable to perform tasks that require them to synthesize information from complex or lengthy texts (Institute of Medicine, 2003). Forty-six percent of American adults are functionally illiterate in dealing with the health care system. Many individuals are reluctant to tell others of their literacy problems because of shame, so health care providers are often unaware that patients do not understand instructions. As it is estimated that 45% of adults living in poverty are functionally illiterate and this is one group that often gets into prenatal care late, it is important that the women benefit from the care that they are able to receive.

Though comprehension of advice and instruction from their physicians has not been cited as a barrier to health care use by women, it is an important issue that needs to be addressed. In 2000, 31.6% of births were to mothers with less than 12 years of education (California Department of Health Services, 2002). At the community meeting, several attendees voiced the importance of keeping all materials at a fourth-grade or lower reading level. This ensures that all materials will be understood by most women who receive prenatal care. Based on a review of the relevant literature, the Center for Health Care Strategies has devised a set of strategies to assist low-literate consumers, and has developed tools to evaluate patient education materials for appropriate health literacy (Center for Health Care Strategies, 1998).

Solution

Develop prenatal care materials that are appropriate for low-literacy groups, or improve use of materials that are already available

The Commission can assist providers by partnering with a group or agency to develop prenatal care materials that are simple to read and include demonstrative pictures. Many health literacy materials are already available in San Joaquin County, such as the Comprehensive Perinatal Services Program (CPSP) patient handouts, known as "Steps to Take." These handouts are low-literacy materials, available in several languages, and are available to all providers who service Medi-Cal obstetrical clients. However, the materials are not universally used, and it may be helpful for the Commission to assist in assessing the barriers to the widespread use of such materials, which may help to improve their utilization and circulation.

The Commission can also provide funding for the training of health care providers on communicating in a manner that is easy for people to understand. According to the Center for Health Care Strategies, patients that have poor health literacy respond better to communication that promoted motivation, self-empowerment, and patient action, as opposed to detailed facts (Center for Health Care Strategies, 1998).

Cultural and Linguistic Competence

Another potential barrier to effective communication between the healthcare provider and the patient is cultural and linguistic competence on the part of the provider. A recent study by the Commonwealth Club, *Diverse Communities, Common Concerns: Assessing Health Care Quality For Minority Americans,* found that, in the United States, one in three Hispanics and one in four Asian Americans have problems communicating with their physicians (Collins, et al, 2002). Asian Americans in particular are less likely to feel that their physicians understand their backgrounds, and are the least likely to receive preventive services.

This idea was echoed by several stakeholders and community members at the community meeting. For example, Pheng Lo at Lao Family of Stockton noted that a lack of providers that speak the language and a lack of cultural competence has contributed to the low level of prenatal care use among Asian and Pacific Islander communities. Also, several meeting attendees emphasized the importance of cultural and linguistic competence on the part of the provider staff.

Cultural and linguistic competence is important for several reasons. One, if a patient does not understand the information given to her because she does not understand the language used by the provider, then she will not be able to act upon the recommendations given. Equally as important is cultural competency. Understanding a patient's cultural background will help the provider better frame the information in such a way that it is relevant for the patient. It will also help the provider understand the preconceptions that a

patient might have about the information received, which the provider can address in an open dialogue, thereby encouraging patient participation in the health process, and improving communication. Also, to ensure that a prenatal patient returns for all recommended visits throughout her pregnancy, she must feel comfortable in the office and working with the providers. Several complaints noted by women surveyed for the *Barriers to Prenatal Care Study* included not liking the doctor (16%) or the health provider support staff, or how they were treated (19%), and the providers not speaking the language (19%). Ensuring cultural competency could possibly overcome these barriers, which are likely caused or exacerbated by differences in culture and language that hamper communication efforts.

Solution

Improve availability of translator services for providers and patients; provide cultural competency training for provider staff

Ideally, the Commission could fund the provision of translators to all primary care providers who request translator services. However, as providers do not always require translation services, particularly for languages that are less commonly spoken in San Joaquin County, it may be more efficient for the Commission to improve access to the current network of translation service providers. If contact information for all translator services in the county was readily available, translators could be contacted on an "as needed" basis, instead of being employed at the locations where services are requested. This approach may reduce the unnecessary duplication of services, while expanding service provision. Contact information for translators can be listed in a resource directory of county service providers, so it is easily accessible.

The El Concilio program at San Joaquin General Hospital is an excellent example of the use of Spanish-language translators to improve communication. Translators were able to assuage fears that women had about prenatal care and childbirth, and answer their questions, which improved the patient's birth experience. Currently this program is primarily for the birth process, and not for prenatal care, and solely provides Spanish-language translators. Improved access to translator services could allow the hospital to extend the program to include prenatal care services, or it could be extended to include advocates that speak other languages.

In addition to providing translators, services could be improved by providing cultural competency programs for health care provider staff to address issues related to cultural and linguistic competence.

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Appendix I. Community Stakeholders to Include

At the September 2003 community meeting, it was noted that several important community stakeholders were not present. Below is a listing of important groups to include when working to improve access to prenatal care in San Joaquin County. This is a general list, categorized by type of stakeholder.

Medical Community

- Medi-Cal
- Medical Providers
- Prenatal Clinic Leadership
- Private hospitals
- Ambulance Services / EMS (absent)
- Medical Director or Rep. (absent)
- Providers that don't have presumptive eligibility
- Maternal Child Director at San Joaquin General Hospital
- Health Plan of San Joaquin

Community Organizations

- Community leaders
- Directors of migrant camps
- Church leaders
- Residence councils
- Community agencies
- Community Representatives – Community Based Agency
- Cultural leadership
- Women who have utilized the system

Government/ Government Agencies

- Women, Infants and Children Program (WIC)
- Local level government
- Political Leaders
- State Legislative representatives
- Management of San Joaquin Human Services Agency
- San Joaquin Regional Transit District (bus system)

Education

- School Districts
- School District Health Services

Funders

- Kellogg Foundation
- The California Wellness Foundation

National Organization

- National Fatherhood Institute
- AmeriCorps
- March of Dimes

Appendix II. Additional Data, San Joaquin County

The following tables were prepared by Pyone Cho, Epidemiologist with Public Health Statistics, San Joaquin County Public Health Services in May 2003. The data were collected from the following sources:

1. Data Tables, Center for Health Statistics California Department of Health Services
2. County Birth Certificates File, BirthNet Database, San Joaquin County Public Health Services
3. County Specific Birth Statistical Master Files, 1998-2001, California Department of Health Services.

Table 1. Entry into Prenatal Care by Maternal Race/Ethnicity (San Joaquin County, 2001)

Timing of Entry into Prenatal Care	Measuring Unit	Maternal Race/Ethnicity					
		Asian & Pacific Islander	**Black**	**Hispanic**	**Native American**	**White**	**Total**
Early	Live Births	960	496	3,023	33	2,577	7,089
	Percent	69.0	65.3	68.0	75.0	82.3	72.3
Late	Live Births	411	226	1,274	11	486	2,408
	Percent	29.5	29.7	28.7	25.0	15.5	24.5
No Prenatal Care	Live Births	8	15	54	0	27	104
	Percent	0.6	2.0	1.2	0.0	0.9	1.1
Unknown	Live Births	12	23	93	0	43	171
	Percent	0.9	3.0	2.1	0.0	1.4	1.7
Race/ Ethnicity Total	Live Births	**1,391**	**760**	**4,444**	**44**	**3,133**	*** 9,811**
	Percent	100	100	100	100	100	100

Table 2. Entry into Prenatal Care by Maternal Age (San Joaquin County, 2001)

Timing of Entry into Prenatal Care	Measuring Unit	Maternal Age Group					
		17 and Under	**18 to 19**	**20 to 29**	**30 to 39**	**40 and Above**	**Total**
Early	Live Births	223	523	3,878	2,339	156	7,119
	Percent	54.4	60.5	72.1	79.6	70.3	72.6
Late	Live Births	169	309	1,341	536	59	2,414
	Percent	41.2	35.8	24.9	18.2	26.6	24.6
No Prenatal Care	Live Births	10	13	56	24	2	105
	Percent	2.4	1.5	1.0	0.8	0.9	1.1
Unknown	Live Births	8	19	101	40	5	173
	Percent	2.0	2.2	1.9	1.4	2.3	1.8
Age Group Total	Live Births	**410**	**864**	**5,376**	**2,939**	**222**	**9,811**
	Percent	100	100	100	100	100	100

Table 3. Entry into Prenatal Care by Maternal Education (San Joaquin County, 2001)

Timing of Entry into Prenatal Care	Measuring Unit	Education Attainment					
		No Formal Education	**Less than High School**	**High School**	**Some College or Higher**	**Unknown**	**Total**
Early	Live Births	56	1,722	2,448	2,821	72	7,119
	Percent	59.6	59.6	73.4	84.0	52.9	72.6
Late	Live Births	36	1,027	802	507	42	2,414
	Percent	38.3	35.6	24.1	15.1	30.9	24.6
No Prenatal Care	Live Births	1	55	32	8	9	105
	Percent	1.1	1.9	1.0	0.2	6.6	1.1
Unknown	Live Births	1	83	52	24	13	173
	Percent	1.1	2.9	1.6	0.7	9.6	1.8
Educational Level Total	Live Births	**94**	**2,887**	**3,334**	**3,360**	**136**	**9,811**
	Percent	100	100	100	100	100	100

Table 4. Timing of Entry of Prenatal Care by Parity (San Joaquin County, 2001)

Timing of Entry into Prenatal Care	Measuring Unit	Parity				
		First Pregnancy	Second Pregnancy	Third Pregnancy	Fourth Pregnancy	Five or More Pregnancies
Early	Live Births	2,440	2,328	1,385	605	360
	Percent [1]	72.5	77.6	73.0	66.6	56.3
Late	Live Births	843	615	459	262	235
	Percent [1]	25.1	20.5	24.2	28.9	36.7
None	Live Births	22	19	19	17	28
	Percent [1]	0.7	0.6	1.0	1.9	4.4
Unknown	Live Births	59	39	33	24	17
	Percent [1]	1.8	1.3	1.7	2.6	2.7
Total	Live Births	**3,364**	**3,001**	**1,896**	**908**	**640**
	Percent [2]	**34.3**	**30.6**	**19.3**	**9.3**	**6.5**

Table 5. Primary Source of Payment for Prenatal Care (San Joaquin County, 2001)

Primary Source of Payment for Prenatal Care		Live Births	Percent of Total Live Births
Government	**Medi-Cal**	3,664	**37.3**
	Medicare	8	0.1
	CPSP	15	0.2
	Other	77	0.8
HMO		3,311	33.7
Private Insurance		1,607	16.4
Blue Cross / Blue Shield		675	6.9
Other *		7	0.1
Self Pay		336	3.4
No Prenatal Care		105	1.1
Unknown		6	0.1
Grand Total		**9,811**	**100**

Table 6. Timing of Entry into Prenatal Care by Selected Source of Payment (San Joaquin County, 2001)

Timing of Entry into Prenatal Care	Measuring Unit	Major Source of Payment				
		Medi-Cal	**HMO**	**Private Insurance**	**Blue Cross/ Blue Shield**	**Self Pay**
Early	Live Births	2,333	2,639	1,430	520	124
	Percent	63.7	79.7	89.0	77.0	36.9
Late	Live Births	1,255	641	174	141	169
	Percent	34.3	19.4	10.8	20.9	50.3
Unknown	Live Births	76	31	3	14	43
	Percent	2.1	0.9	0.2	2.1	12.8
Total	Live Births	**3,664**	**3,311**	**1,607**	**675**	**336**
	Percent	100	100	100	100	100

Table 7. Timeliness of Entry into Prenatal Care by Zip Code Area (San Joaquin County, 2001)

Zip Code Area	Total Live Births	Timing of Entry into Prenatal Care							
		Early		Late *		Never		Unknown	
		N	%	N	%	N	%	N	%
95201	3	3	100	0	0	0	0	0	0
95202	236	136	58	86	**36**	4	2	10	4
95203	340	230	68	97	**29**	6	2	7	2
95204	441	330	75	99	22	2	0	10	2
95205	818	501	61	278	**34**	14	2	25	3
95206	1,222	818	67	344	**28**	18	1	42	3
95207	836	602	72	219	**26**	5	1	10	1
95209	474	370	78	101	21	1	0	2	0
95210	720	507	70	199	**28**	6	1	8	1
95212	82	70	85	11	13	1	1	0	0
95215	343	218	64	110	**32**	3	1	12	3
95219	244	193	79	47	19	0	0	4	2
95220	70	48	69	21	**30**	1	1	0	0
95227	8	7	88	1	13	0	0	0	0
95230	7	6	86	1	14	0	0	0	0
95231	59	35	59	21	**36**	1	2	2	3
95234	3	1	33	2	**67**	0	0	0	0
95236	48	36	75	10	21	2	4	0	0
95237	40	30	75	8	20	1	3	1	3
95240	846	603	71	213	**25**	17	2	13	2
95242	269	221	82	44	16	1	0	3	1
95253	2	2	100	0	0	0	0	0	0
95258	60	49	82	9	15	0	0	2	3
95304	66	52	79	13	20	1	2	0	0
95320	124	107	86	16	13	0	0	1	1
95327	1	1	100	0	0	0	0	0	0
95330	206	151	73	49	24	2	1	4	2
95336	558	467	84	82	15	6	1	3	1
95337	292	227	78	60	21	2	1	3	1
95361	1	1	100	0	0	0	0	0	0
95366	150	136	91	14	9	0	0	0	0
95376	1,056	802	76	236	22	11	1	7	1
95377	148	133	90	14	9	0	0	1	1
95378	1	1	100	0	0	0	0	0	0
95385	5	1	20	4	**80**	0	0	0	0
95391	1	1	100	0	0	0	0	0	0
95686	10	9	90	1	10	0	0	0	0
Unspecified	21	14	67	4	19	0	0	3	14
All Areas	**9,811**	**7,119**	**73**	**2,414**	**25**	**105**	**1**	**173**	**2**

Table 8. Distribution of Birth Weight San Joaquin County, 2001

Birth Weight (in grams)		Live Births	Percent of Total Live Births
Low Birth Weight	Less than 1,500 (*very low birth weight*)	115	1.2
	1,500 – 2,499	504	5.1
	Total	619	6.3
2,500 & Above		9,191	93.7
County Total		*** 9,811**	**100**

Note. * Include one newborn baby with unknown birth weight.
Percents are rounded independently and may not add to totals.

Table 9. Distribution of Low Birth Weight Babies by Maternal Race/Ethnicity San Joaquin County, 2001

Maternal Race/Ethnicity	Total Live Births	Low Birth Weight (in grams)					
		Under 1,500 *		1,500 to 2,499		Total (All Live Births under 2,500)	
		N	%	N	%	N	%
Asian & Pacific Islander	1,391	18	1.3	89	6.4	107	7.7
Black	760	14	1.8	63	8.3	77	10.1
Hispanic	4,444	46	1.0	202	4.5	248	5.6
Native American	44	0	0.0	4	9.1	4	9.1
White	3,133	37	1.2	142	4.5	179	5.7
Other/Unknown	39	0	0.0	4	10.3	4	10.3
Category Total with Row Percent	**9,811**	**115**	**1.2**	**504**	**5.1**	**619**	**6.3**

Note. * Very low birth weight.
Percents are rounded independently and may not add to totals.

Table 10. Association between Birth Weight and Prenatal Care (San Joaquin County, 2001)

Timing of Entry into Prenatal Care	Measuring Unit	Birth Weight		
		Under 2,500 grams (Low Birth Weight)	2,500 grams or more	Total
Early	Live Births	424	6,695	7,119
	Percent	6.0	94.0	100
Late	Live Births	145	2,269	2,414
	Percent	6.0	94.0	100
None	Live Births	25	80	105
	Percent	23.8	76.2	100
Unknown	Live Births	25	148	173
	Percent	14.5	85.5	100
Total	Live Births	**619**	**9,192**	**9,811**
	Percent	**6.3**	**93.7**	100

Note: Percent = row percent.

Table 11. Association between Gestational Age and Prenatal Care (San Joaquin County, 2001)

Timing of Entry into Prenatal Care	Measuring Unit	Gestational Age				
		Before 37 Weeks (Preterm)	37 to 42 Weeks	43 Weeks or More	Unknown	Total
Early	Live Births	718	5,971	285	145	7,119
	Percent	10.1	83.9	4.0	2.0	100
Late	Live Births	246	1,875	183	110	2,414
	Percent	10.2	77.7	7.6	4.6	100
None	Live Births	14	29	5	57	105
	Percent	13.3	27.6	4.8	54.3	100
Unknown	Live Births	9	38	4	122	173
	Percent	5.2	22.0	2.3	70.5	100
Total	Live Births	**987**	**7,913**	**477**	**434**	**9,811**
	Percent	**10.1**	**80.7**	**4.9**	**4.4**	100

Note. Percent = row percent.

Appendix III. *Barriers to Prenatal Care Study* by National Public Health and Hospital Institute

The best source of information currently available that identifies barriers to prenatal care that are specific to San Joaquin County is the *Barriers to Prenatal Care Study*, a study that was conducted recently by the National Public Health and Hospital Institute (NPHHI).

In late 2002 and early 2003, the NPHHI conducted a survey at 26 hospitals in 16 states of women who had recently given birth. The survey asked the women several questions about their prenatal experiences, among which were the barriers that were mostly likely to inhibit their use of prenatal care. One of the hospitals at which this survey was conducted was San Joaquin General Hospital. The survey was conducted at the hospital from October 7 to October 20, 2002 among 103 women, with a 99% participation rate. Fifty-four surveys were completed in English and 48 surveys were completed in Spanish. Please see a sample of the survey in Appendix IV.

As shown in the table below, the group that was surveyed at San Joaquin General Hospital is somewhat demographically different from the San Joaquin County population as a whole, but is more representative of the groups of women who are less likely to receive early prenatal care. As a group, 61% of the women began prenatal care during the first trimester, and 30% began their care in the second trimester, rates that are somewhat lower than for the overall rates for the county. Prior to pregnancy, 49% of the respondents did not have health insurance, compared to 13% at the time of delivery. Most of the mothers that obtained coverage did so through Medi-Cal. [2]

[2] The study indicates that 50% of women used Medicaid for their insurance coverage at the time of birth. However, on the survey, another category, "other," garnered 28% of responses. It is possible that several of the "other" responses referred to Medi-Cal, and that the women surveyed did not understand that Medi-Cal is California's Medicaid program. Therefore, it is likely that over 50% of the women surveyed were using Medi-Cal as their insurance provider during pregnancy.

Table 12. Characteristics of Women Giving Birth at San Joaquin General Hospital (Fall of 2002 and Early Winter, 2003)

Characteristics	*Percent of Women*
Mother's Race/Ethnicity	
White	15%
Black	7%
Hispanic	69%
Other	1%
Asian /Pacific Islander	8%
Native American	0%
Mother's Level of Education	
0-8 years	14%
9-11 years	37%
12 years / GED	29%
13-15 years	14%
16 years or more	6%
Married	
Yes	55%
No	45%
Years Since Last Live Birth	
<2 years	30%
2-5 years	48%
5 years or more	22%
Immigrant Status	
Yes	N/A
No	N/A

Thank you for your help!

The NPHHI Barriers to Prenatal Care Survey was developed by Marsha Regenstein, Ph.D., Linda Cummings, Ph.D., and Jennifer Huang, M.S. It was based in part on surveys used in the following studies: (1) Braveman P, Marchi K, Egerter S, Pearl M., Neuhaus J. Barriers to timely prenatal care among women with insurance: the importance of prepregnancy factors. Obstetrics and Gynecology. 2000; 874-880, and (2) Cook CA, Selig KL, Wedge BJ, Gohn-Baube EA. Access barriers and the use of prenatal care by low-income, inner-city women. Soc Work 1999 Mar;44(2):129-39.

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May we have

a moment of your time?

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FOR HOSPITAL USE ONLY:

❑ *Please check here if all or part of the survey was read to the patient.*

Patient's primary language: _____

Your help is needed!

*Please answer the following questions about your health care **while you were pregnant**. These questions are NOT about your care here in the hospital now. The survey should only take about ten minutes to complete.*

***Do not write your name or any personal information on this form. The nurse or hospital staff member can help you if you do not understand a question.** Thank you for your help!*

The nurse has a small thank you gift for you when you complete this survey!

1. Do you have health insurance now? ..... ❑ YES ❑ NO ❑ Don't know

2. If you have health insurance now, what type do you have?
   ❑ Medicaid ❑ Private insurance through my job or my husband's job
   ❑ Other type of insurance ❑ Don't know

3. In the month or two before you became pregnant with this child, did you have health insurance? ..... ❑ YES ❑ NO ❑ Don't know

4. If you had health insurance in the month or two before you became pregnant with this child, what type was it?
   ❑ Medicaid ❑ Private insurance through my job or my husband's job
   ❑ Other type of insurance ❑ Don't know

5. **Before** you were pregnant, did the cost of going to the doctor or nurse ever stop you from getting health care when you were sick or when you needed a check-up? ..... ❑ YES ❑ NO

6. **During** this pregnancy, did the cost of going to the doctor, nurse, or midwife ever stop you from getting health care? ..... ❑ YES ❑ NO

7. Overall, how would you rate the quality of the health care you received while you were pregnant?
   ❑ Excellent ❑ Good ❑ Fair ❑ Poor

8. Did you take vitamins **while** you were pregnant? ..... ❑ YES ❑ NO

9. Did you take vitamins **before** you knew you were pregnant? ..... ❑ YES ❑ NO

10. Where did you **usually** get health care during the last three months of your pregnancy?

    Name of clinic: _____

11. Did you go to the emergency room or labor and delivery emergency room during the last three months of your pregnancy? *(do not include your delivery)* ..... ❑ YES ❑ NO

12. If yes, about how many times during the last three months of your pregnancy did you go to the emergency room or labor and delivery emergency room? *(circle number)* 1 2 3 4 5 More than 5

13. Did you usually try to contact your doctor before going to the emergency room or labor and delivery emergency room? ..... ❑ YES ❑ NO

There are many reasons why women miss appointments or put off getting check-ups while they are pregnant.

14. Did you miss any check-ups or put off going to the doctor, nurse, or midwife because:
    - you didn't have insurance to pay for check-ups? ..... ❑ YES ❑ NO
    - you didn't know where to go? ..... ❑ YES ❑ NO
    - you couldn't arrange for transportation? ..... ❑ YES ❑ NO
    - it took too long to get there? ..... ❑ YES ❑ NO
    - you couldn't get time off from work or school? ..... ❑ YES ❑ NO
    - you couldn't get childcare? ..... ❑ YES ❑ NO
    - you couldn't find a place that would take your insurance? ..... ❑ YES ❑ NO
    - you thought going to a clinic could cause legal problems for you? ..... ❑ YES ❑ NO

15. Did you miss any check-ups or put off going to the doctor, nurse, or midwife because:
    - you were afraid people at the clinic would give you a hard time about some things you were doing? ..... ❑ YES ❑ NO
    - you don't like to visit a doctor, nurse, or midwife? ..... ❑ YES ❑ NO
    - you didn't think it was important, because you've had other children ? ..... ❑ YES ❑ NO
    - you didn't think it was important to see the doctor, nurse, or midwife at the beginning of your pregnancy? ..... ❑ YES ❑ NO
    - you didn't like the way people at the clinic treated you? ..... ❑ YES ❑ NO
    - you were worried other people might find out you were pregnant.? ..... ❑ YES ❑ NO
    - you were embarrassed about being pregnant? ..... ❑ YES ❑ NO
    - you were unhappy or depressed about having the baby? ..... ❑ YES ❑ NO
    - you weren't sure if you wanted the baby? ..... ❑ YES ❑ NO

16. Did you miss any check-ups or put off going to the doctor, nurse, or midwife because:
    - people in your life didn't want you to see a doctor, nurse, or midwife? ..... ❑ YES ❑ NO
    - staff at the clinic didn't speak the language you prefer? ..... ❑ YES ❑ NO
    - the clinic didn't have hours at night or on weekends? ..... ❑ YES ❑ NO
    - you heard it was a bad place to get check-ups while pregnant? ..... ❑ YES ❑ NO
    - their waiting room was too noisy or crowded? ..... ❑ YES ❑ NO
    - you had to wait too long to get an appointment? ..... ❑ YES ❑ NO
    - you had to wait too long to see the doctor, nurse, or midwife? ..... ❑ YES ❑ NO